

HIGH OCCUPANCY TOLL (HOT) LANE PILOT PROJECT

BRIEFING PAPER

Prepared for the
November 2003 Transportation Commission Meeting

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PURPOSE:

Provide an overview of the findings of the draft High Occupancy Toll (HOT) Lane Feasibility Analysis and the SR 167 HOT Lane Pilot Project proposal. Seek Commission comments and questions in preparation for the December Commission meeting and potential action on this item.

ACTION/OUTCOME:

Review conclusions of the analysis of the SR 167 Pilot Project proposal with the Commission. Approval for action will be requested at the December Commission meeting.

BACKGROUND:

In January of 2003, the Washington State Transportation Commission adopted a resolution directing WSDOT to evaluate the possible implementation of High Occupancy Toll (HOT) lane systems for managing HOV lane capacity that is consistent with the maintenance of trip reliability and travel-time performance for transit and van pools. This resolution was prompted by a recent study of the region's 205-mile HOV lane system.

The intent of this effort is to improve the overall efficiency of the roadway while maintaining the travel speeds for transit and other HOV lane users. This can be accomplished by taking advantage of the unused capacity available in the existing HOV lane by converting it to a HOT lane. A HOT lane refers to one or more HOV lanes on a highway that uses tolls as a means to maintain travel-time speed and reliability. Solo drivers would be allowed to pay a toll using an electronic toll-collection system – no tollbooths would be required. Toll prices would vary, depending on traffic volumes, as a means to guarantee and maintain HOV/HOT lane travel speed and reliability. Access into the HOT lanes would remain free for transit, carpools and vanpools, providing HOV users of the corridor a free and fast alternative at the same time it provides solo drivers an alternative to peak period congestion. According to the results from other HOT lane projects, all travelers in a HOT lane corridor will benefit by experiencing reduced travel times.

The conversion of HOV lanes to HOT lanes was successful in Texas and California and is now under consideration in several other states. Where tested, public acceptance of these projects has been positive. Of the four HOT facilities that have been developed, three were converted from existing HOV lanes. None of the HOT lane facilities implemented to date has the same operational characteristics as those that are being

considered in this region. One key difference is the number of access points connecting to the HOT lane.

The WSDOT analysis focused on HOV-roadway segments that have congestion in the peak direction, available HOV lane capacity, and room to make needed improvements. Six segments of the HOV system were identified as viable candidates. A segment of SR 167 was selected as the top candidate for continued analysis and a proposed HOT lane pilot project.

DISCUSSION:

The analysis that has been conducted of the SR 167 Pilot Project includes one percent design of the HOT lane roadway, traffic modeling, an operational evaluation and revenue estimates. Because we did not receive an anticipated federal grant for this work, the amount of design and public outreach has been reduced to meet budget constraints.

The SR 167 Pilot Project proposal is to convert the existing HOV lanes on SR 167 to HOT lanes – approximately nine miles in each direction from I-405 to Southwest 15th Street. This would involve re-striping the existing lanes to create a four-foot buffer between the single HOT lane and the two general-purpose lanes. Access to the HOT lanes would be provided at each end and at several mid point locations between interchanges. A minor improvement to the interchange at I-405 is also proposed. If approved, this pilot project will be the first demonstration program in the U.S. that evaluates the efficiencies that can be gained by the conversion of a single HOV lane to a HOT lane with multiple access points.

Findings of the analysis indicate there are still several unanswered questions related to access and egress to the HOT lanes that will only be known by actual implementation. The traffic modeling that has been done indicates that implementation of HOT lanes can improve the overall effectiveness of the existing facility.

The capital cost estimate for this SR 167 Pilot Project is approximately \$12 to \$13 million based on one percent design and includes the improvements to the I-405 interchange. Additional investigation of administrative costs are needed (e.g. administrative costs, transponders, public outreach, etc.)

If approved by the Transportation Commission, granted legislative authority, and funding is provided, actual implementation of a HOT lane conversion could take place as early as 2005. Implementation would require further refinement of the design and cost estimates for the toll collections system, administrative facilities and public outreach.

Additional Notes

WSDOT is coordinating with Tacoma Narrows Bridge, Washington State Patrol and Department of Licensing on implementation and operational issues. Because of the uniqueness of this proposal, it is receiving national attention.

RECOMMENDATION:

Will be provided at the December meeting.

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